

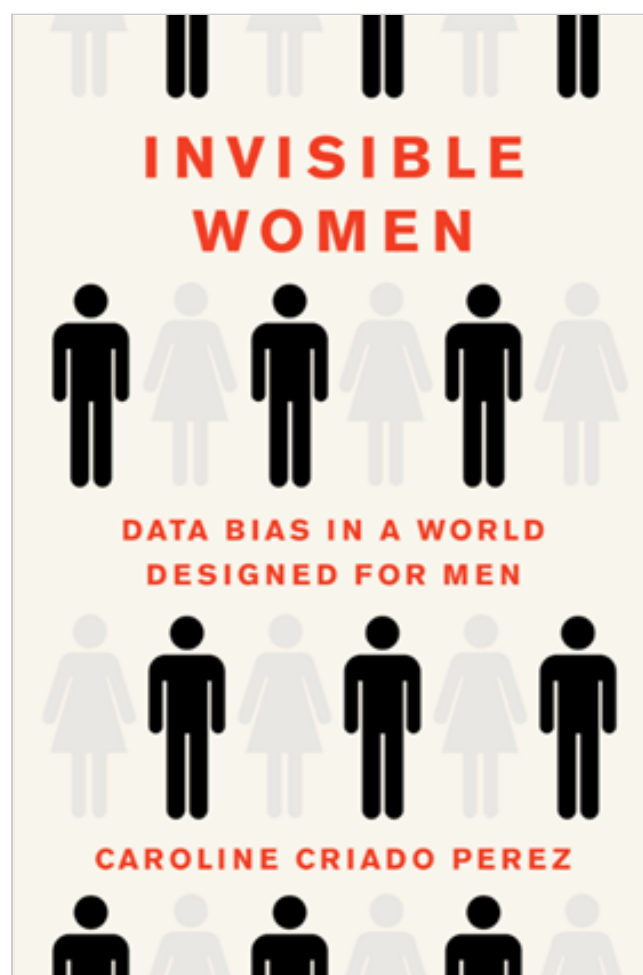
Closing the gender data gap to create equality

Invisible Women: Data Bias in a World Designed for Men.

By Caroline Criado Perez. Abrams Press, 2019, 432 pp., \$27.00 hardcover.

In *Invisible Women: Data Bias in a World Designed for Men*, author Caroline Criado Perez uses data to reveal the existence of a gender data gap and to argue that this gap puts women at a disadvantage. The author depicts a world with a “default male” perspective, describing the consequences it has for women. These consequences range from eliminating women from the narrative of history (with female work often being attributed to men) to subjecting them to outdated office temperature settings (a 1960 formula still in use bases these settings on an average 154-pound, 40-year-old man). Using data from various surveys and studies, Perez points to specific situations in which the default male perspective is most likely to occur and to hurt women. The author also relies on research conducted by others to illuminate the need for data that could inform better decisions in establishing a more equal work–life balance, creating accommodating workplaces and equipment designs for women, and achieving better female healthcare outcomes.

One of the main discrepancies in the experiences of women and men is related to unpaid work (cooking, cleaning, and doing laundry for a household). Perez cites a 2010 U.S. study which found that the unpaid work of female scientists adds 10 extra hours per week to their workload, compared with 5 extra hours for male scientists. (These extra hours are on top of a nearly 60-hour workweek.) These data are important because they may have direct health implications. A 2015 Finnish study cited in the book found that unmarried women had higher rates of recovery from heart attacks, and a 2016 Canadian study found that women’s household burdens contributed to their having worse outcomes after heart surgery. Further, according to a University of Michigan study, a marriage penalty exists whereby “husbands create an extra seven



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hours of housework a week”—an imbalance that persists irrespective of the employment statuses of household members. Combined, these studies reinforce the view that gender discrepancies in unpaid work can hurt women.

In the workplace, the gender data gap can be observed in contexts as simple as parking-space assignment. We all have noticed handicap parking places, which have been established by federal law. But what about parking places for, say, pregnant women? Perez recounts the case of a pregnant Chief Operating Officer at a Fortune 500 company who, tired of walking across a parking lot every day, brought up the issue with the company’s Chief Executive Officer (CEO). The CEO agreed that pregnancy parking places should be created, but before the issue was raised, no thought had been given to it.

How about when it comes to equipment designs? Perez provides many real-world examples of designs initially meant for men and subsequently scaled down for female use. These “smaller” designs were not based on female specifications, and yet they were falsely thought to be the answer. Companies often have warning labels that caution against wearing ill-fitted gear, because such gear can increase the risk of an accident. A 2009 survey conducted by the Women’s Engineering Society found that 74 percent of personal protective equipment (PPE) was specifically designed for men. As Perez notes, there seems to be a one-size-fits-men design for most PPE. Unisex designs would seem like a good idea, but they would still not account for actual differences between women and men. The car-crash test dummy introduced in 1950, for instance, was based on the 15th-percentile (5-foot, 9-inch and 167.5-pound) male body. At the time, no equivalent crash-test dummy existed for women (although a call was made to create one in 1980), and when one was introduced in 2011, it lowered vehicle safety ratings because most car manufacturers did not account for female body characteristics when designing automobiles. The author notes that the female crash-test dummy is still not being tested on the driver side, but only on the passenger side. By overlooking how a car driven by a woman performs in a crash, car manufacturers create a gender data gap. Researchers have found that when women are involved in a car crash, they are 17 percent more likely to die, 47 percent more likely to be seriously injured, and 71 percent more likely to be moderately injured than men.

Turning to healthcare, Perez points to a 2014 Federal Drug Administration study which found that adverse drug reactions are more common among women (2 million recorded cases) than among men (about 1.3 million recorded cases). A possible explanation for this finding could be that many studies do not specify the sex of their participants or do not include women in clinical trials. This practice can have adverse effects because what benefits one sex may be harmful to the opposite sex. For example, in one medical technology study, an analysis of a cardiac resynchronization therapy device found that a 150-millisecond threshold for the time the heart completes a full circuit worked for men but was 20 milliseconds too high for women. Thus, lowering the optimal threshold for women would benefit them by reducing heart failures and deaths.

Overall, Perez’s book shows that addressing the gender data gap would require collecting data disaggregated by sex. In addition, there is a need to collect information in areas in which no data are currently being collected. The many examples in the book illustrate how these approaches can make women visible and immune to potential harm from universal male standards. The book is thoroughly researched, pulling data and insights from various sources to make the case for closing the gender data gap.